

Positivist and Interpretivist Ideas of Anol Bhattacharjee on The Methods of Data Collection: A Textual Critique

Vivian C. Kapilima*

Abstract

In the literature, the distinction between positivism and interpretivism based on ontological assumptions is somehow clear. Problems in dividing them based on epistemological assumptions continue to exist and appear in several works; for instance, Bhattacharjee's book (2012) introduced the concept of research design and categorization of methods of data collection based on positivist and interpretivist epistemological assumptions. While acknowledging Bhattacharjee's contribution, nonetheless, the paper argues that since both the quantitative and qualitative research approaches share a few epistemological assumptions, strictly categorizing them into positivism and interpretivism raises some confusion. Consequently, impacting communication among researchers and the implementation of the research projects. Therefore, the paper describes Bhattacharjee's contributions and limitations in understanding the dichotomy existing between positivist and interpretivist methods of data collection. The paper's suggestions aim to resolve such confusion and restore research approaches and their methods of data collection to their original philosophical positions. Thus minimizing the existing confusion on research methodology in the current literature.

Keywords: Positivism, interpretivism, data collection methods[†]

* Department of Leadership, Ethics and Governance. The Mwalimu Nyerere Memorial Academy, Dar es Salaam, Tanzania; kapilimavivian@yahoo.com.

[†] Received on March 28, 2024. Accepted on April 30, 2024. Published on June 30, 2024. DOI: 10.23756/sp.v12i1.1589. ISSN 2282-7757; eISSN 2282-7765. ©Kapilima. This paper is published under the CC-BY licence agreement.

1. Introduction

Positivism and interpretivism are among the dominant philosophical views developed as a result of growing ontological and epistemological controversies from the beginning of the 19th century to the present era. Basically, the controversy is on what exactly constitutes reality (ontology) and how such reality can be studied (epistemology). It is clear that, ontologically, positivists believe that reality is one (objective); however, interpretivists believe that there are multiple realities, depending on the perceptual views of the informants. Therefore, reality is subjective, according to interpretivist scholars. Furthermore, the distinction between positivism and interpretivism based on ontological assumptions is somehow clear despite the existing debates. Nonetheless, the problem of dividing them based on epistemological assumptions continues to exist due to several factors, one of which is the nature of the study and its objectives. For instance, although ethnography has been regarded as an interpretivist study, Creswell (2007) considers realist ethnography as a positivist kind of ethnography when the researcher keeps his distance from the subjects of his/her study in order to maximize the objectivity of data. Creswell's accounts imply observation, a positivist method of data collection, was used in an ethnographic study. As regards to Anol Bhattacharjee's textbook "Social Science Research: Principles, Methods, and Practices" (2012), 2nd edition, he distinguishes positivism and interpretivism philosophies as used in social sciences. In addition, he categorizes methods of data collection based on the positivist and interpretivist conceptions. Thus, categorizing data collection methods based on the epistemological assumptions of positivism and interpretivism philosophies.

Furthermore, while it is generally agreed positivism informs quantitative research (Deepty, 2021, p. 63), and interpretivism guides qualitative research (Saunders et al., 2009). Bhattacharjee instead of stating that methods of data collection are categorized into quantitative and qualitative research approaches, he argues that the same can be categorized into positivism and interpretivism (Bhattacharjee, 2012, p. 35). Therefore, based on this, confusion may arise among social science researchers, especially the novices who may not be well versed with the epistemological arguments around social science research. Despite his insightful contributions to social science research he ought to have noted that both the quantitative and qualitative research approaches share some few epistemological assumptions. Thus, avoid categorizing methods of data collection into positivism and interpretivism, as this may impact communication among researchers during research project presentations and discussions. Moreover, the confusion may delay the research review process and the timely completion of the research projects.

Positivist and Interpretivist Ideas of Anol Bhattacharjee on The Methods of Data Collection: A Textual Critique

Therefore, in the paper, we review Bhattacharjee's ideas on the categorization of data collection methods using positivist and interpretivist conceptions. We describe his contributions and limitations in understanding the dichotomy existing between positivist and interpretivist methods of data collection. Then, we suggest ways through which the existing confusions that appear in Bhattacharjee's book and other scholarly works could be resolved. The suggestions also aim to restore the quantitative and qualitative research approaches and their methods of data collection to their original philosophical positions. This is one way of minimizing existing confusion in the current body of literature in social science research regarding the positivist and interpretivist methods and techniques of social inquiry.

2. Bhattacharjee's ideas on the categorization of data collection methods into positivist and interpretivist conceptions

In his book "Social Science Research: Principles, Methods, and Practices" (2012, p. 35), 2nd edition, Bhattacharjee has suggested a useful perspective we can think of in categorizing methods of data collection into positivism and interpretivism philosophies. He states that,

“Data collection methods can be broadly grouped into two categories: positivist and interpretive; positivist methods, such as laboratory experiments and survey research, are aimed at theory (or hypotheses) testing, while interpretive methods, such as action research and ethnography, are aimed at theory building; positivist methods employ a deductive approach to research, starting with a theory and testing theoretical postulates using empirical data; interpretive methods employ an inductive approach that starts with data and tries to derive a theory about the phenomenon of interest from the observed data; quantitative and qualitative methods refer to the type of data.....being collected and analyzed; positivist research uses predominantly quantitative data but, can also use qualitative data. Interpretive research relies heavily on qualitative data but can sometimes benefit from including quantitative data as well; in action research, the researcher is usually a consultant or an organizational member embedded within a social context such as an organization, who initiates an action, such as new organizational procedures or new technologies in response to a real problem. The researcher then observes the results of that action, modifying it as necessary while simultaneously learning from the action and generating theoretical insights about

the target problem and interventions (p. 40); ethnography is an interpretive research design inspired by anthropology that emphasizes that research phenomenon must be studied within the context of its culture. The researcher is deeply immersed in a certain culture over an extended period of time (8 months to 2 years), and during that period, engages, observes, and records the daily life of the studied culture, and theorizes about the evolution and behaviors in that culture. Data is collected primarily via observational techniques, formal and informal interaction with participants in that culture, and personal field notes, while data analysis involves sense-making” (Bhattacharjee, 2012, pp. 35, 40).

Therefore, based on the above excerpts from Bhattacharjee's book, it is clear that readers, especially novice researchers, could be influenced to think along the positivist and interpretivist research traditions. For instance, he has categorized action research and ethnography as interpretivist studies and laboratory experiments and surveys aimed at testing theories as positivist studies. He offers insights we can conceptualize about the purposes of positivist and interpretivist studies and the type of data they gather. Moreover, Bhattacharjee identifies observation as the dominant method employed by action researchers and ethnographers in the data collection process. This could be a way of emphasizing the usefulness of observation methods in action research and ethnographic studies and that researchers who are interested in adopting such research designs must also be willing to engage in observation and, more particularly, participant observation (Hart, 2017, p. 4). In this regard, observation methods have been widely considered as the hallmark of true ethnography (p. 4) and action research in particular. This is a valid argument since, in the hierarchy of evidence, first-hand observations have been prioritized in these research designs in order to minimize the problems of memory and bias in data interpretation (Lubet, 2018, p. 18; Shesterinina, 2021, p. 852).

Despite his useful insights, Bhattacharjee's categorization of data collection methods into positivist and interpretivist philosophies and the distinction between these two philosophical traditions based on epistemological assumptions create confusion in his work. The same confusion also appears in several other scholarly works, for instance, Saunders et al. (2009), Deepty (2021, p. 63) and Ntseno (2022, p. 62). These works also draw a distinction between positivism and interpretivism and strictly argue that quantitative study belongs to positivism and qualitative to interpretivism without considering that positivist quantitative study and positivist qualitative study share some epistemological assumptions. For instance, a realist ethnography, which is a qualitative study, may be considered a positivist study if the researcher employs the observation method and follows Creswell's recommendations of distancing himself from the subjects of his/her study in order to maximize the objectivity of data (Creswell, 2007). Therefore,

the subsequent section identifies and describes confusion and limitations in such scholarly works by focusing on Bhattacharjee's book.

3. Limitations of Bhattacharjee's categorization of data collection methods into positivist and interpretivist philosophical views

Bhattacharjee claims to categorize methods of data collection based on the positivist and interpretivist philosophical views; however, he has not directly mentioned those methods in his text, except when explaining action research and ethnography as interpretivist study designs in other parts of his work. For example, on page 40, Bhattacharjee mentions observation and formal and informal interactions with participants in their cultural context as the primary methods of data collection in action and ethnographic research designs. Recall that action research and ethnography have been termed interpretivist forms of research when he categorized methods of data collection into positivist and interpretivist philosophies (p. 35). Given that he and other scholars, such as Hart (2017, p. 4), claim that observations are the dominant methods of data collection in interpretivist studies and are the hallmark of true interpretivist studies, and the fact that laboratory experiments mainly apply observation methods in problem investigation, and are categorized as positivist studies, likewise, interpretivist studies such as action research and ethnography can also be categorized as pure positivist studies despite that they employ interpretivism. Hence, the confusion alluded to earlier on.

The Hawthorne experiment by Elton Mayo in the 1920s and 1930s (Peng et al., 2023) is widely recognized as a useful example of a social science study that employed mainly observation methods of data collection to study how employees' working behavior changes with changing working conditions and their impact on production in the organization. Based on the examples given by Bhattacharjee when he was explaining the application of interpretivist action research by a consultant or an organization member (see p. 40), it appears that the Hawthorne study qualifies to be an interpretivist action research as it employed observation as its main method of data collection. However, we believe some elements of interpretivism followed after the observation method during the study. Given that a laboratory experiment employing observation as the primary method of investigation is pure positivist research, according to Bhattacharjee (p. 35), the action and ethnographic research designs applying observation as the dominant method of investigation, as Bhattacharjee stated, can also be regarded as pure positivist studies.

Notwithstanding, the Hawthorne study we have mentioned as an example can also be categorized as a pure positivist study.

From the above explanations, we have noted some inadequacies and confusion in Bhattacharjee's categorization of data collection methods into positivist and interpretivist conceptions and the distinction between positivism and interpretivism based on the epistemological assumptions. First, as alluded to earlier, his distinctions between positivist and interpretivist methods of data collection were not supported by direct examples of such methods. Despite that an advanced intellectual can make assumptions of such methods that may sound correct to Bhattacharjee and the views of other scholars, Bhattacharjee's piece of work needed to expose such methods and schematize them according to the epistemological assumptions of each philosophical doctrine. This attempt could enhance the understanding of novice researchers and the application of the concepts. Second, the statement that "quantitative and qualitative methods refer to the type of data being collected and analyzed" (p. 35) is not correct, and it may raise confusion among the novice researchers. Generally, methods and data are different terms in their application. We believe that Bhattacharjee is aware of such differences. Therefore, we assume the mistakes in the definition could be a result of writing errors.

Third, the confusion that appears in his text and other scholarly works is rooted in the basic ideas of these scholars regarding epistemological positions in social inquiry. For instance, Bhattacharjee's epistemological position that theory testing belongs to positivism and theory building to interpretivism is the source of several confusions we have identified above. We accept that such an approach of distinguishing between positivism and interpretivism is somehow helpful and easy to recall; however, it is insufficient, narrow in scope and creates confusion in the body of literature. We have noted such confusion even in Bhattacharjee's book. Bhattacharjee conceives that theory testing is mainly the activity of positivism (p. 35). Given that observation is the dominant method in positivist research, such as laboratory experiments, as Bhattacharjee illustrated, how do we call the research that does not test theories but rather applies mainly observation methods and builds theories? In our view, such research can also be termed positivist. We can find that our response is also supported by Bhattacharjee's accounts of the conduct of action and ethnographic studies, on page 40, despite the fact that he did not mention such studies as positivistic.

As alluded to earlier, given that action research and ethnography use mainly observation methods, as Bhattacharjee himself and other scholars (Cowie 2009, p. 167; Anderson, 2011, p. 101) argue, such research designs are purely positivist despite that they adopt interpretivism to support their analyses and discussion of findings. Even quantitative studies, which have been regarded as positivist, may adopt an interpretivist

Positivist and Interpretivist Ideas of Anol Bhattacharjee on The Methods of Data Collection: A Textual Critique

approach to illustrate an anomalous/peculiar result of the statistical test. Therefore, an absence of theory testing part of the research or numerical data does not disqualify the positivist status of the study employing the observation method of data collection. What qualifies non-theory testing studies such as ethnography to be regarded as pure positivist is their immense appeals to observation evidence in understanding reality. Therefore, in summary, the confusion that appears in Bhattacharjee's book is that both laboratory experiments, action research and ethnography, adopt mainly observation method of data collection (pp. 35, 40), which has been the main emphasis of positivist philosophers since the time of Francis Bacon (1561- 1626); however, he categorizes laboratory experiment as a positivist study and action research and ethnography as interpretivist studies (see p. 35). Even if action research and ethnography would not test theories, the fact that they rely heavily on observation to build theories makes them strongly qualified to be pure positivist studies. Thus, the idea that quantitative studies (and all those studies involved in statistical analysis for various purposes, including hypothesis testing) are mainly positivist and empirical and non-quantitative are non-positivist/empirical is misleading.

Notwithstanding, it is a weak idea to disqualify action research and ethnography or exploratory research (and their methods, i.e., interviews and FGDs) from the positivist realm on the ground that they employ interpretivism or constructivism in theory building and quantitative studies apply the deductive approach, gather data (through surveys), and test theories. Lastly, as alluded to earlier, Bhattacharjee categorizes methods of data collection into positivist and interpretivism philosophies, which is in a way good as it stimulates our thinking on the differences between positivist and interpretivist methods and techniques of data collection; however, the same insufficiently lines up with our expectations. Nevertheless, in his work, Bhattacharjee continues to make categorization by stating that such methods, i.e., "positivist methods employ a deductive approach to research, starting with a theory and testing theoretical postulates using empirical data" In our view, it is not clear, which positivist methods employ a deductive approach, and which interpretivist methods employ an inductive approach? Generally, the most common data collection methods involve observation, personal interviews, focus group discussions, mail surveys and documentary reviews. Therefore, it would be nice if Bhattacharjee could clearly show which of these methods are positivist and which ones belong to interpretivism. Additionally, do all those classified as positivistic employ a deductive approach to research? For instance, observation may considered to be a positivist method of data collection, so does it employ a deductive approach to a research involving theory testing? Our response to the question is that observation is an inductive method of data collection (Page & Connell, 2012, p. 458) and is unable to employ a deductive approach to research involving theory testing. In addition, interpretivist

methods can be applied to the observations to generate assumptions/hypotheses/theories which can be tested.

4. Amendments

As we have stated in the previous sections, despite Bhattacharjee's useful contributions to the social science research literature, there is confusion in his epistemological assumptions in an attempt to categorize methods of data collection based on positivist and interpretivist philosophical views. For example, he has not explicitly mentioned those methods in his text; nonetheless, while seasoned intellectuals can make assumptions of such methods that may sound correct to Bhattacharjee and the views of other scholars, the same may not be true for novices. Therefore, Bhattacharjee's book needed to expose such methods and schematize them according to the epistemological assumptions of each philosophical doctrine. This attempt could enhance the understanding of novice researchers and the application of the concepts. For instance, he could state that observation is an example of the positivist method of data collection. For that case, given that both quantitative and qualitative research may use facts obtained through observations to establish a conclusion, they then equally qualify to be positivist. Examples of interpretivist methods of data collection are personal interviews, personal experiences, focus group discussions, and textual analysis/documentary reviews. These methods are referred to as interpretivist methods because the researcher is the instrument of data collection (Crawford, 1987; Daniel, 2018). Generally, the researcher is free to use his/her personal theoretical lenses in framing the methods and applying techniques before and during the data collection process and in getting a sense of the story being told by the collected data during its analysis.

Furthermore, a study collecting data through observations, personal interviews and focus group discussion can be both positivist and interpretivist. In addition, a study employing participant observation for an extended period can be regarded as pure positivist despite the fact that it also employs an interpretivist approach. For that case, ethnography which may take a period of 8 months to 2 years, as Bhattacharjee stated, must be regarded as a pure positivist study. According to Creswell (2007), realist ethnography can be seen as a positivist kind of ethnography when the researcher keeps his distance from the subjects of his/her study in order to maximize the objectivity of data. Even if the study employs observation as its dominant method of data collection for a short period (as for action research and others), it must be regarded as a pure positivist study in the sense that it gathers and analyses facts.

Positivist and Interpretivist Ideas of Anol Bhattacharjee on The Methods of Data Collection: A Textual Critique

Regarding Bhattacharjee's use of the deductive approach in his categorization of data collection methods into positivist and interpretivist philosophies, he does not explicitly state how positivist methods employ a deductive approach to research leading to theory testing. Our views on this incorrect conception have been explained with examples in the previous sections. Here, we recommend that the term positivist methods should be omitted because we are not convinced if there is a positivist method of data collection that can self-employ a deductive approach to research leading to theory testing. An example has been provided in the previous section, and we argued that what is practicable is the application of interpretivist methods (i.e., on observations) to generate assumptions/hypotheses/theories, which can then be tested.

Bhattacharjee was interested in using the concept of the deductive approach in his work regarding the categorization of data collection methods into positivist and interpretivist philosophies. Given that a deductive approach is a way of establishing a conclusion by using reasoning/set of assumptions, such an approach is useful for developing assumptions/hypotheses and, finally, the construction of a questionnaire for data collection. Generally, data collected through questionnaires are subjected to statistical tests so that hypothesis/assumptions/theory formulated can be accepted or rejected. Therefore, instead of Bhattacharjee saying positivist methods employ a deductive approach to research leading to theory testing, a statement which is not clear, he could argue that positivist research usually collects quantitative data through questionnaires and that analysis of such data allows theory testing. Nonetheless, such a questionnaire must be closed-ended. According to Tshabangu et al. (2020), a closed-ended questionnaire is a positivist instrument of data collection.

Bhattacharjee's epistemological position that theory testing belongs to positivism and theory building to interpretivism is a narrow view since it implies that the research which does not test theories may not be considered positivist, an assertion that ethnographers and several other scholars may reject. Furthermore, observation has been one of the recommended positivist methods of social inquiry since the inception of inductive logic; therefore, amendments should be made in Bhattacharjee's book to incorporate the view that action research and ethnography are pure positivist research designs on the ground that observation is their main method of data collection as stated by Bhattacharjee (p. 40). Additionally, Bhattacharjee's statement that quantitative and qualitative methods refer to the type of data being collected and analyzed (p. 35) is not correct, as previously stated. It is not clear what kind of methods he was referring to. Since he was categorizing methods of data collection into positivism and interpretivism philosophies, he probably meant quantitative and qualitative methods of data collection. However, the statement that quantitative and qualitative methods refer to the type of data being collected and

analyzed may create confusion for those who strictly distinguish between data and methods of data collection or types of data and methods of data collection. To avoid confusion that may arise in future times, we recommend that such a statement must be amended to reflect the real meaning of data and the methods of data collection.

Generally, the inadequacies and confusions that appear in Bhattacharjee's book on the categorization of data collection methods into positivist and interpretivist perspectives (p. 35) are mainly based on epistemological assumptions. We recommend that all epistemological assumptions of each philosophical orientation must be considered in a scholarly work in order to avoid confusion and miscommunication that may arise between the author and the readers. Moreover, scholars interested in working with either positivism or interpretivism or both of them must avoid biases in presenting the epistemological or ontological assumptions of any philosophy. Therefore, since a scholar may be familiar with the epistemological or ontological assumptions of a certain philosophy based on his/her biases and interests, it is recommended that he/she should not impose such assumptions or an entire philosophical tradition over others.

References

J. Anderson. *Media Research Methods Understanding Metric and Interpretive Approaches*. Los Angeles: SAGE. 2011.

A. Bhattacharjee. *Social Science Research: Principles, Methods, and Practices* (2nd ed.). Textbooks collection. 2012. Disponibile su Scholar Commons.

N. Cowie. "Observation". In: Heigham, J., Croker, R.A. (eds.) *Qualitative Research in Applied Linguistics*. London: Palgrave Macmillan. 2009. https://doi.org/10.1057/9780230239517_8.

L. Crawford. "Intercultural Communication Study: A description of an Interpretive/Ethnographic Approach". 1987. <https://eric.ed.gov/?id=ED281262>.

J. Creswell. *Qualitative Inquiry and Research Design: Choosing among five approaches*. London: SAGE Publications. 2007.

B. Daniel. "Empirical verification of the 'TACT' framework for teaching rigour in qualitative research methodology". *Qualitative Research Journal*, 18 (3), 262-275. 2018. <https://doi.org/10.1108/QRJ-D-17-00012>.

S. Deepty. "In Search of Paradigmatic Diversification in Academic Finance". *Journal of Business Studies*, 52 (1), 59-71. 2021.

Positivist and Interpretivist Ideas of Anol Bhattacharjee on The Methods of Data Collection: A Textual Critique

T. Hart. "Online Ethnography". In J. Matthes (Ed.), *The International Encyclopedia of Communication Research Methods*. Wiley & Sons, Inc. <https://doi.org/10.1002/9781118901731.iecrm0172>. 2017.

S. Lubet. *Interrogating Ethnography*. New York: Oxford University Press. 2018.

C. Ntseno. *Higher Education Policies and Institutional Theological Education Needs: A practical Theological Exploration with Specific References to Private Theological Institutions in South Africa*. PhD Thesis [University of South Africa]. 2022. https://uir.unisa.ac.za/bitstream/handle/10500/29216/this_ntseno_cj.pdf?sequence=1&isAllowed=y.

S. Page & J. Connell (Eds.). *The Routledge Handbook of Events*. USA: Routledge. 2012.

P. Peng., W. Zhao., X. Deng., B. Guo., & W. Wu. "Research on Evaluation of Construction Workers' Job Satisfaction Based on Improved AHP-FCE Method". In: Li, J., Lu, W., Peng, Y., Yuan, H., Wang, D. (eds) *Proceedings of the 27th International Symposium on Advancement of Construction Management and Real Estate*. CRIOCM 2022. *Lecture Notes in Operations Research*. Springer, Singapore. 2023. https://doi.org/10.1007/978-981-99-3626-7_70.

M. Saunders., P. Lewis., & A. Thornhill. *Research Methods for Business Students* (5th Edn). Rome: Prentice Hill. 2009.

A. Shesterinina. "Sources of evidence and openness in field intensive research on violent conflict". *Politics, Groups, and Identities*, 9 (4), 851-857. 2021. DOI: 10.1080/21565503.2021.1950015.

I. Tshabangu., S. Ba., & S. Madondo. *Approaches and Processes of Social Science Research*. A volume in the *Advances in Knowledge Acquisition, Transfer, and Management (AKATM) Book Series*. IGI Global. Publisher of Timely Knowledge. 2020.